

In the Claims

Please amend claim 1 as follows:

1. A method of producing a transgenic alkaloid producing poppy plant comprising the steps of:

5 1) introducing exogenous nucleic acid for conferring a selected property on the transgenic plant into plant material in the presence of a buffering agent which prevents, reduces the rate of, or delays a rise in pH, of the plant material or culture medium for culturing of the plant material, from a desired pH level;

10 2) culturing the plant material in the presence of the buffering agent; and

10 3) generating the transgenic plant from the plant material.

Please amend claim 2 as follows:

2. A method of transforming an alkaloid producing poppy plant comprising the step of introducing exogenous nucleic acid for conferring a selected property on the transgenic plant into plant material of the poppy plant in the presence of a buffering agent which prevents, reduces the rate of, or delays a rise in pH of the plant material, or culture medium for the plant material, from a desired pH level.

Please amend claim 3 as follows

20 3. A method of producing a transgenic alkaloid producing poppy plant from plant material harbouring exogenous nucleic acid for conferring a selected property on the transgenic plant, comprising the steps of:

25 1) culturing the plant material in culture medium in the presence of a buffering agent which prevents, reduces the rate of, or delays a rise in pH of the culture medium or the plant material; and

2) generating the transgenic plant from the plant material.

Please amend claim 4 as follows:

30 4. The method according to claim 2 wherein the transgenic plant is an alkaloid producing *Eschscholtzia* species.

Please amend claim 5 as follows:

35 5. The method according to claim 2 wherein the transgenic plant is a *Papaver* species.

Please amend claim 6 as follows:

6. The method according to claim 5 wherein the *Papaver* species is *Papaver somniferum*.

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Please amend claim 7 as follows:

7. The method according to claim 2 wherein the plant material is derived from seeds, imbibed seeds or seedling parts of the plant.

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Please amend claim 8 as follows:

8. The method according to claim 2 wherein the plant material is selected from the group consisting of seed explant, seedling explant, type I callus, type II callus, somatic embryogenic callus, any culture which gives rise to somatic embryos, and any culture which gives rise to shoots and plant tissues.

Please amend claim 9 as follows:

- 20 9. The method according to claim 2 wherein the rise in pH is prevented or delayed.

Please amend claim 10 as follows:

10. The method according to claim 2 wherein the pH is maintained between pH 5.5 and
25 6.5.

Please amend claim 11 as follows:

11. The method according to claim 2 wherein the buffering agent is selected from the group consisting of 2-[N-morpholino]ethane sulfonic acid buffer (MES), N-[2-acetamido]-2-iminodiacetic acid buffer (ADA) and bis[2-hydroxyethyl]iminotris-[hydroxymethyl]methane buffer (BIS-TRIS), and a buffer having an ammonium and nitrate ions content in a predetermined ratio.

- 35 Please amend claim 12 as follows:

12. The method according to claim 2 wherein the exogenous nucleic acid is introduced into plant cells by a plant transformation agent.

Please amend claim 13 as follows:

13. The method according to claim 12 wherein the transformation agent is *Agrobacterium tumefaciens*.

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Please amend claim 14 as follows:

14. The method according to claim 2 wherein the exogenous nucleic acid is introduced using a mechanical method.

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Please amend claim 15 as follows:

15. The method according to claim 14 wherein the mechanical method is microparticle bombardment.

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Please amend claim 16 as follows:

16. The method according to claim 4 or claim 5 wherein the exogenous nucleic acid encodes a mRNA or protein that confers on the transgenic plant a property selected from the group consisting of:

increased alkaloid yield relative to the native alkaloid producing plant, increased herbicide resistance relative to the native alkaloid producing plant, increased soil acidity tolerance relative to the native alkaloid producing plant, increased disease resistance relative to the native alkaloid producing plant, increased inset resistance relative to the native alkaloid producing plant, increased growth rate relative to the native alkaloid producing plant, improved flowering properties relative to the native alkaloid producing plant, increased frost tolerance relative to the native alkaloid producing plant and altered alkaloid proportions relative to the native alkaloid producing plant.

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Please amend claim 17 as follows:

17. The method according to claim 4 or claim 5 wherein the exogenous nucleic acid encodes a mRNA or protein that confers on the transgenic poppy the property of altered alkaloid proportions relative to the native alkaloid producing plant.

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Please amend claim 18 as follows:

18. The method according to claim 4 or claim 5 wherein the exogenous nucleic acid encodes a mRNA or protein that confers on the transgenic poppy the property of herbicide resistance.

Please amend claim 19 as follows:

19. The method according to claim 18 wherein the herbicide resistance is selected from the
5 group consisting of Basta herbicide resistance, glyphosate resistance, bromoxynil resistance
and sulfonylurea resistance.

Please amend claim 24 as follows:

24. A transgenic plant prepared by the method of claim 1 or claim 2.

10 Please amend claim 26 as follows:

26. The transgenic plant according to claim 24 wherein the plant is selected from the
group consisting of *Papaver* species and *Eschscholtzia* species.

15 Please amend claim 27 as follows:

27. The transgenic plant according to claim 24 wherein the *Papaver* species is *Papaver somniferum*.

20 Please amend claim 28 as follows:

28. The transformed plant material produced by the method according to claim 1 or claim 2.

25 Please amend claim 29 as follows:

29. The transformed plant material according to claim 28, selected from the group
consisting of seed explant, seedling explant, type I callus, type II callus and somatic
embryogenic callus.

30 Please cancel claims 20 to 23 and claim 25.

REMARKS

35 Claims 1 to 29 were pending in this application prior to the filing of the present
response. Claims 20 to 23 and claim 25 have now been cancelled. Accordingly, claims 1 to
19, 24 and 26 to 29 remain.

Claims 4 to 23, 25 to 27 and 29 have been rejected due for informalities. Applicants
have cancelled claim 25 and amended the other of these claims as suggested by the
40 Examiner.